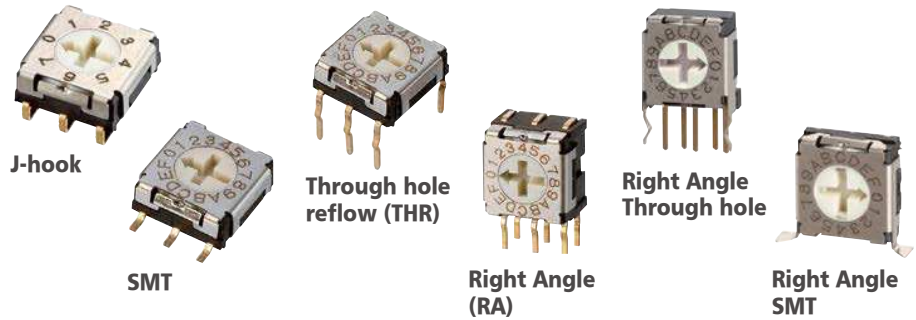


SWITCH ROTARY SWITCH

DRG-7 Series

MINIATURE SIZE □7X3 ROTARY DIP SWITCH



FEATURES

- Low profile of 3.0mm
- THR (Through Hole Reflow) version available
- Available with spindle or slotted spindle
- Supply various switch codes, include Gray code, Real code and Complement code
- Gold plated contact area ensures reliable electric continuity for micro current
- Surface mounting type can be supplied in embossed taping for automatic packing
- Pin-out is compatible with most of current equivalents
- All plastics are UL 94V-0 grade fire retardant
- RoHS Compliant

APPLICATIONS

- Address switching applications
- Data storage devices
- Computer and peripherals
- Instrumentation
- HVAC (Heating, Ventilation and Air Conditioning)

SPECIFICATIONS

1. ELECTRICAL

| | |
|------------------------------|--------------------------------|
| Max. switching load | 100 mA, 5 VDC |
| Min. switching load | 10 μ A, 5 VDC |
| Contact resistance (initial) | 200 m Ω Max. |
| Insulation resistance | 100 M Ω Min. at 100 VDC |
| Dielectric strength | 250 VAC rms. for 60 seconds |

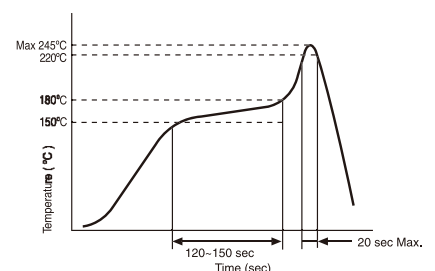
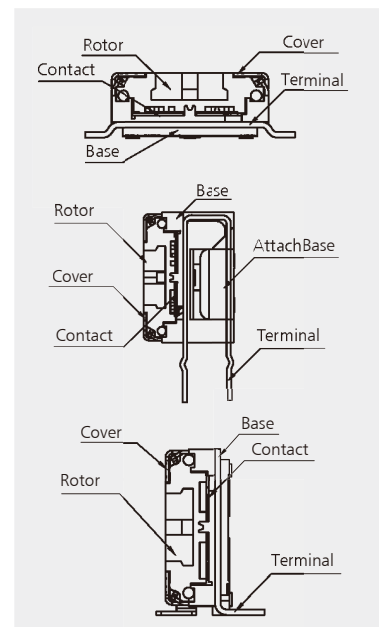
2. MECHANICAL and ENVIRONMENTAL

| | |
|------------------------------|--|
| Temperature rating | |
| operating | -40°C to +85°C |
| storage | -40°C to +85°C |
| Operating force | 510gf-cm Max. |
| Operation life | 10,000 detents Min. |
| Vibration | 10Hz-55Hz-10Hz for 6Hrs. |
| Solderability | After flux 245 \pm 5°C for 5 \pm 1 seconds |
| Resistance to soldering heat | |
| Solder bath | 260 \pm 5°C for 5 \pm 1 seconds |
| Solder reflow | Peak temperature 260°C Max. |

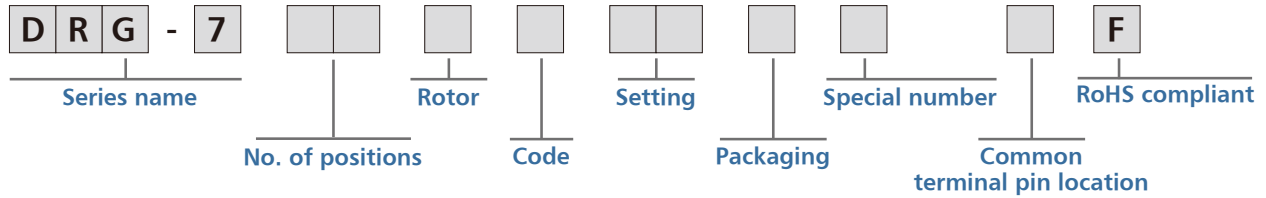
3. SOLDERING PROCESS

| | |
|---|-----------------|
| Reflow soldering heat for SMT type (reference only) | |
| Solder iron | Max. 2sec/350°C |

CONSTRUCTION



PART NUMBERING SYSTEM



| Series name | |
|------------------|---|
| D R G - 7 | Miniature Size □ 7X3 Rotary DIP Switch |

| No. of positions | |
|------------------|--------------|
| 0 8 | 8 positions |
| 1 0 | 10 positions |
| 1 6 | 16 positions |

| Rotor | |
|----------|-----------------|
| L | Flat type |
| S | Spindle |
| H | Slotted spindle |

| Code | |
|----------|---|
| R | Real code/ Arrow shaped slot type |
| A | Real code/Cross shaped slot type |
| C | Complement code/ Arrow shaped slot type |
| B | Complement code/Cross shaped slot type |
| G | Gray code / Cross shaped slot type |

| Setting | |
|--------------|---|
| [] [] | Standard type with row spacing 7.62mm |
| R [] | Right Angle type with row spacing 1.27 mm |
| R 2 | Right Angle type with row spacing 2.54 mm |
| R 5 | Right Angle type with row spacing 5.08 mm |
| M [] | Surface mounting type |
| R L | Right Angle with Surface Mounting type and forward support terminal |
| R M | Right Angle with Surface Mounting type and side support terminal |
| J [] | J-hook with Surface Mounting type |

| Packaging | |
|-----------|-----------------------|
| [] | Tube packaging |
| C | Tape & Reel Packaging |

| Special number | |
|----------------|---------------------------------------|
| G | Standard for terminal "R" & "RM" only |

| Common terminal pin location | |
|------------------------------|--|
| E | Center Common terminal pins location (3:3 pin out) Center Output "8" terminal pin location (3:2, 5:0 pin out) |
| J | Side Common terminal pins location (3:3 pin out) Center Output "1" terminal pin location (3:2, 5:0 pin out) |

CODE

Real / Complement code

| PIN NO. | POSITION | | | | | | | | | | | | | | | |
|---------|----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F |
| 1 | ○ | ● | ○ | ● | ○ | ● | ○ | ● | ○ | ● | ○ | ● | ○ | ● | ○ | ● |
| 2 | ○ | ○ | ● | ● | ○ | ○ | ● | ● | ○ | ○ | ● | ● | ○ | ○ | ● | ● |
| 4 | ○ | ○ | ○ | ○ | ● | ● | ● | ● | ○ | ○ | ● | ● | ● | ● | ○ | ○ |
| 8 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

○ — Real Code
Rotor color : White

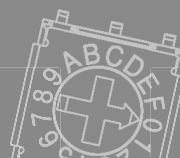
● — Complement Code
Rotor color : Red

Gray Code (16 position)

| PIN NO. | POSITION | | | | | | | | | | | | | | | |
|---------|----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F |
| 1 | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 2 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 4 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 8 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

○ — Gray Code
Rotor color : Gray

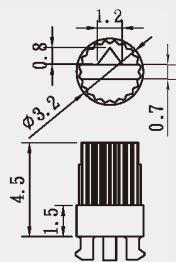
SWITCH ROTARY SWITCH



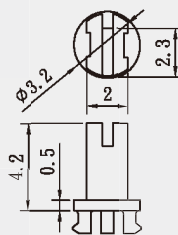
OPTIONS

- Special marking available
- Shaft available. (For Cross shaped slot type only)

118-90500F (S type)



118-90900F (H type)

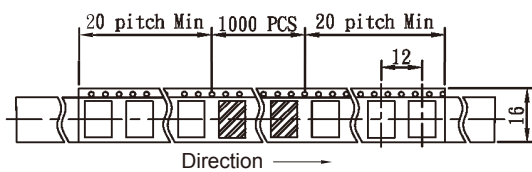


PACKAGING

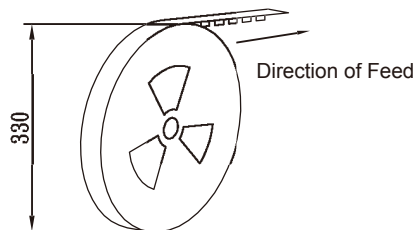
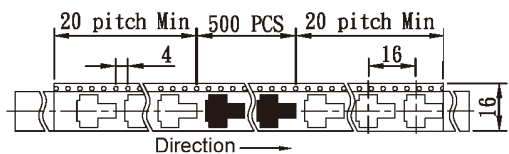
- Packaging Method

| TYPE | PACKAGE | Number of pcs. per IC tube | Number of pcs. per Reel |
|------------------|---------|----------------------------|-------------------------|
| Top Adjust Type | | 70 | 1000 |
| Side Adjust Type | | 70 | 500 |

DRG-7□□□□MC□□F / DRG-7□□□□JC□□F



DRG-7□□□□RMCG□□F / DRG-7□□□□RLC□□F



QUICK SELECTION GUIDE

| SIZE | POSITIONS | CODE | SETTING POSITION | PIN OUT | SHAPE OF TERMINAL | PART NUMBER | | | |
|-------|-----------|--------------------------------|----------------------|-----------------------------|-----------------------------|-----------------|-------|------------------------|---------------|
| 7 x 7 | 8, 10, 16 | REAL , COMPLEMENT , GRAY | TOP SETTING | 3 : 3 | STANDARD | DRG-7□□□□□F | | | |
| | | | | | SMT | DRG-7□□□□M□F | | | |
| | | | | | SMT IN T&R | DRG-7□□□□LM□F | | | |
| | | | | | J-HOOK WITH SMT | DRG-7□□□□J□F | | | |
| | | | | | | SIDE SETTING | 3 : 3 | J-HOOK WITH SMT IN T&R | DRG-7□□□□LJ□F |
| | | | RIGHT ANGLE | DRG-7□□□□R2/R5□F | | | | | |
| | | | RIGHT ANGLE | DRG-7□□□□RG□F | | | | | |
| | | | RIGHT ANGLE WITH SMT | DRG-7□□□□RL□F | | | | | |
| | | | 5 : 0 | RIGHT ANGLE WITH SMT IN T&R | DRG-7□□□□RMG□F | | | | |
| | | | | RIGHT ANGLE WITH SMT IN T&R | DRG-7□□□□RLC□F | | | | |
| | | | | | RIGHT ANGLE WITH SMT IN T&R | DRG-7□□□□RMGC□F | | | |

DIMENSIONS & CIRCUITRY

Unit mm (inch)

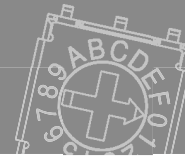
PIN OUT 3 : 3

Center Common terminal pins location

Side Common terminal pins location

| | | |
|---------------|--|--|
| STANDARD TYPE | DRG-7□□□□EF Standard Type | DRG-7□□□□JF Standard Type |
| | DRG-7□□□□MEF Gulling Type | DRG-7□□□□MJF Gulling Type |

SWITCH ROTARY SWITCH



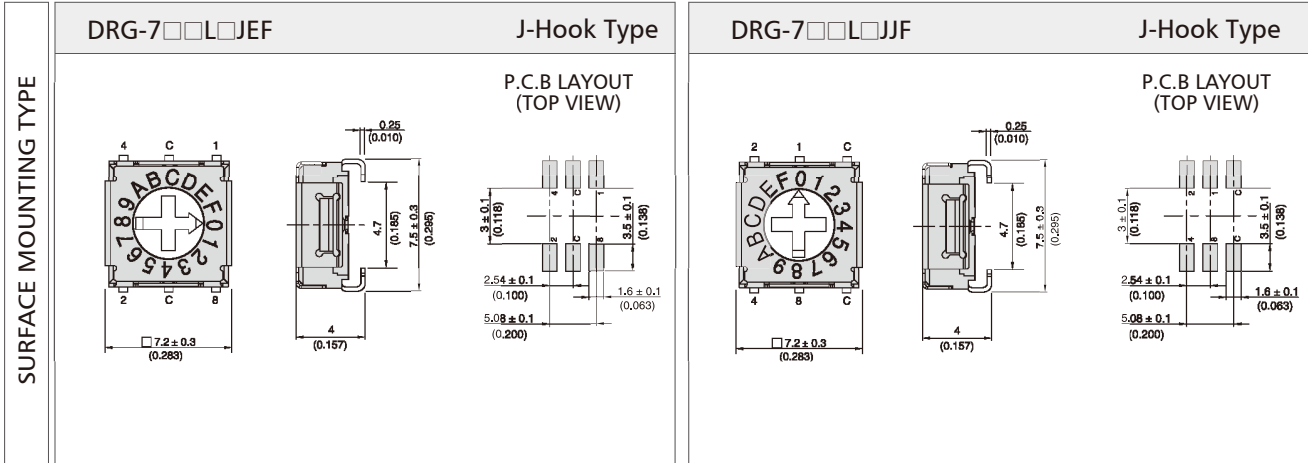
DIMENSIONS & CIRCUITRY

Unit mm (inch)

PIN OUT 3 : 3

Center Common terminal pins location

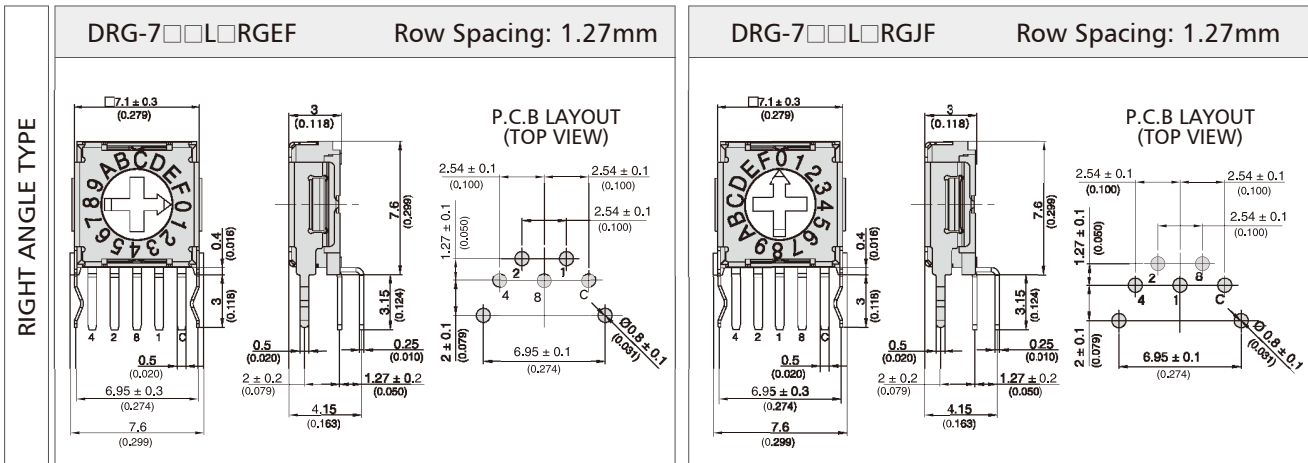
Side Common terminal pins location



PIN OUT 3 : 2

Center Output 8 terminal pin location

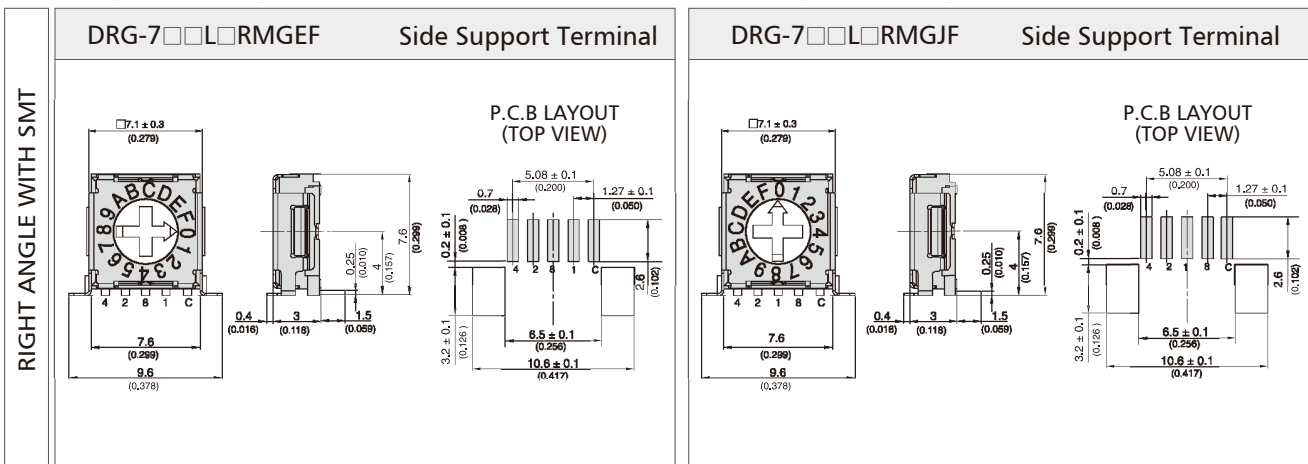
Center Output 1 terminal pin location



PIN OUT 5 : 0

Center Output 8 terminal pin location

Center Output 1 terminal pin location



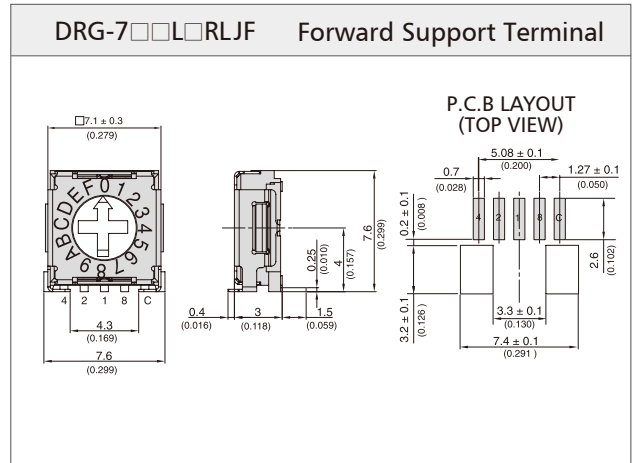
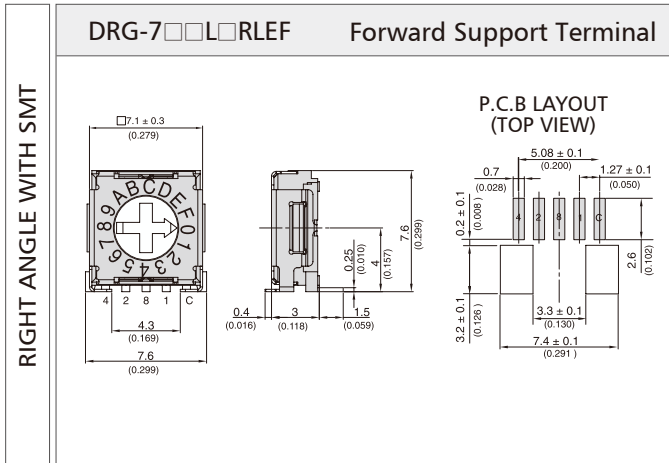
DIMENSIONS & CIRCUITRY

Unit mm (inch)

PIN OUT 5 : 0

Center Output 8 terminal pin location

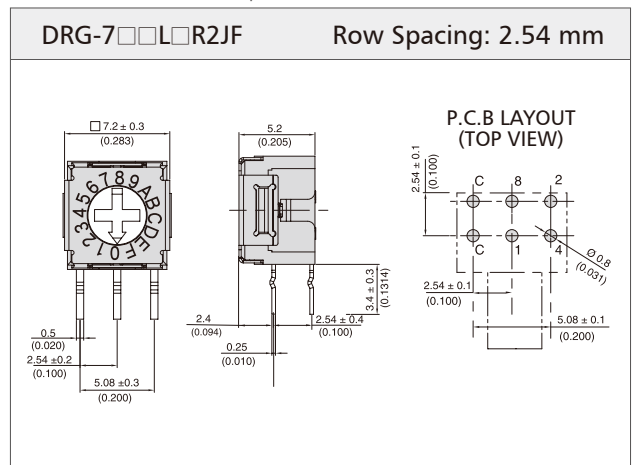
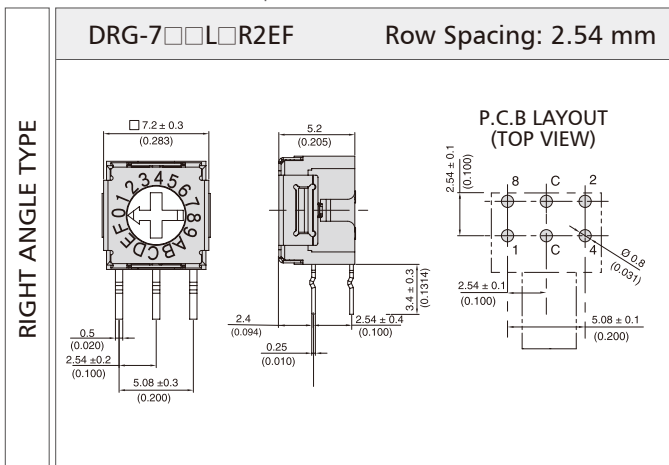
Center Output 1 terminal pin location



PIN OUT 3 : 3

Center Common terminal pins location

Side Common terminal pins location



Center Common terminal pins location

Side Common terminal pins location

